

Application No.: 10/780,747
Amendment under 37 CFR 1.111
February 21, 2006

IN THE CLAIMS

Please substitute the following claims for the pending claims with the same numbers respectively:

Claim 1 (Currently amended): A mobile terminal device having a route guiding function of guiding along a route by obtaining map information from a server system via a radio communication network, comprising:

a position detecting unit which detects a current position of the mobile terminal device;

a bearing detecting unit which detects a first bearing to which the mobile terminal device is directed;

a map information acquiring unit which transmits predetermined specific information to identify a destination and positional information of ~~[[the]]~~ a current position to the server system, and acquires map information on a section containing the destination and the current position from the server system;

a target bearing calculating unit which calculates a second bearing from a current position to the destination based on the positional information and the predetermined specific information;

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a displaying unit which displays a map based on the ~~acquired~~ map information acquired from said map information acquiring unit, displays predetermined icon images at a position of the destination and the current position respectively, and displays an icon image indicating the first bearing; and

a target capturing unit which produces a sound effect in response to a difference between the ~~[[firs]]~~ first and second bearings.

Claim 2 (Currently amended): ~~[[A]]~~ The mobile terminal device having a route guiding function according to claim 1, wherein the target capturing unit produces different melodies in response to the difference between the first and second bearings.

Claim 3 (Currently amended): ~~[[A]]~~ The mobile terminal device having a route guiding function according to claim 1, wherein the target capturing unit blinks the icon image displayed at the position of the destination when the first bearing coincides with the second bearing.

Claim 4 (Currently amended): A mobile terminal device having a route guiding function of guiding along a route by

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obtaining map information from a server system via a radio communication network, comprising:

a position detecting unit which detects a current position of the mobile terminal device;

a bearing detecting unit which detects a first bearing to which the mobile terminal device is directed;

a map information acquiring unit which transmits predetermined specific information to identify a destination and positional information on ~~[[the]]~~ a current position to the server system, and acquires map information of a section containing the destination and the current position from the server system;

a target bearing calculating unit which calculates a second bearing from the current position to the destination based on the positional information and the specific information;

a displaying unit which displays a map based on the ~~acquired~~ map information acquired from said map information acquiring unit, displays a predetermined icon image at the current position, and displays an icon image indicating the first bearing and an icon image indicating the second bearing; and

a target capturing unit which produces a sound effect in response to a difference between the first and second bearings.

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Claim 5 (Currently amended): [[A]] The mobile terminal device having a route guiding function according to claim 4, wherein the target capturing unit produces different melodies in response to the difference between the first and second bearings.

Claim 6 (Currently amended): A route guiding method utilizing a mobile terminal device including a position detecting unit for detecting a current position of the mobile terminal device and a bearing detecting unit for detecting a first bearing to which the mobile terminal device is directed to the mobile terminal device, and a server system, to which the mobile terminal device is connected via a radio communication network and which stores a map database including map information including map image data and information to identify a position on a map, the method comprising the steps of:

causing the server system to execute the steps of,

searching the map information containing a destination and the current position from the map database based on positional information of the current position and specific information of the destination which are transmitted from the mobile terminal device, and

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sending the ~~searched~~ map information obtained in said step of searching the map information to the mobile terminal device; and

causing the mobile terminal device to execute the steps of,

transmitting ~~predetermined~~ the specific information designated by a user to the server system,

transmitting the positional information of the current position detected by the position detecting unit to the server system,

receiving the map information sent from the server system,

calculating a second bearing from the current position to the destination based on the positional information and the specific information,

displaying a map based on the ~~acquired~~ map information acquired in said step of searching the map information,

displaying predetermined icon images to overlap with a position of the destination and the current position, and displaying an icon image indicating the first bearing, and

producing a sound effect in response to a difference between the first and second bearings.

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Claim 7 (Currently amended): A route guiding method utilizing a mobile terminal device including a position detecting unit for detecting a current position of the mobile terminal device and a bearing detecting unit for detecting a first bearing to which the mobile terminal device is directed to the mobile terminal device, and a server system, to which the mobile terminal device is connected via a radio communication network and which stores a map database including map information including map image data and information to identify a position on a map, the method comprising the steps of:

causing the server system to execute the steps of,

searching the map information containing a destination and the current position from the map database, based on positional information of the current position and specific information of the destination which are transmitted from the mobile terminal device, and

sending the ~~searched~~ map information obtained in said step of searching the map information to the mobile terminal device; and

causing the mobile terminal device to execute the steps of

transmitting the specific information designated by a user to the server system,

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transmitting the positional information of the current position detected by the position detecting unit to the server system,

receiving the map information sent from the server system,

calculating a second bearing from the current position to the destination based on the positional information and the specific information,

displaying a map based on the ~~acquired~~ map information acquired in said step of searching the map information,

displaying a predetermined icon image at the current position, and displaying an icon image indicating the first bearing and an icon image indicating the second bearing, and

producing a sound effect in response to a difference between the first and second bearings.

Claim 8 (Currently amended): A computer readable recording medium storing a program for guiding along a route with utilizing a mobile terminal device including a position detecting unit for detecting a current position of the mobile terminal device and a bearing detecting unit for detecting a first bearing to which the mobile terminal device is directed to the mobile terminal device, and a server system, to which the mobile terminal device is

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connected via a radio communication network and which stores a map database including map information including map image data and information to identify a position on a map, wherein

the program causes the server system to execute the steps of,

searching the map information containing a destination and the current position from the map database based on positional information of the current position and specific information of the destination which are transmitted from the mobile terminal device, and

sending the ~~searched~~ map information obtained in said step of searching the map information to the mobile terminal device; and

the program causes the mobile terminal device to execute the steps of,

transmitting ~~predetermined~~ the specific information designated by a user to the server system,

transmitting the positional information of the current position detected by the position detecting unit to the server system,

receiving the map information sent from the server system,

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calculating a second bearing from the current position to the destination based on the positional information and the specific information,

displaying a map based on the ~~acquired~~ map information acquired in said step of searching the map information, displaying predetermined icon images to overlap with a position of the destination and the current position, and displaying an icon image indicating the first bearing, and producing a sound effect in response to a difference between the first and second bearings.

Claim 9 (Currently amended): A computer readable recording medium storing a program for guiding along a route with utilizing a mobile terminal device including a position detecting unit for detecting a current position of the mobile terminal device and a bearing detecting unit for detecting a first bearing to which the mobile terminal device is directed to the mobile terminal device, and a server system, to which the mobile terminal device is connected via a radio communication network and which stores a map database including map information including map image data and information to identify a position on a map, wherein

the program causes the server system to execute the steps of,

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searching the map information containing a destination and the current position from the map database, based on positional information of the current position and specific information of the destination which are transmitted from the mobile terminal device, and

sending the ~~searched~~ map information obtained in said step of searching the map information to the mobile terminal device; and

the program causes the mobile terminal device to execute the steps of,

transmitting the specific information designated by a user to the server system,

transmitting the positional information of the current position detected by the position detecting unit to the server system,

receiving the map information sent from the server system,

calculating a second bearing from the current position to the destination based on the positional information and the specific information,

displaying a map based on the ~~acquired~~ map information acquired in said step of searching the map information,

displaying a predetermined icon image at the current

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position, and displaying an icon image indicating the first bearing and an icon image indicating the second bearing, and producing a sound effect in response to a difference between the first and second bearings.

Please add the following new claims 10-18 as follows:

Claim 10 (New): The mobile terminal device having a route guiding function according to claim 1, further comprising a relative bearing calculating unit which calculates the difference between the first bearing and the second bearing.

Claim 11 (New): The mobile terminal device having a route guiding function according to claim 4, further comprising a relative bearing calculating unit which calculates the difference between the first bearing and the second bearing.

Claim 12 (New): The route guiding method utilizing a mobile terminal device according to claim 6, further comprising the step of: calculating a relative bearing which is the difference between the first bearing and the second bearing.

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Claim 13 (New): The computer readable recording medium storing a program for guiding along a route with utilizing a mobile terminal device according to claim 8, further comprising the step of: calculating a relative bearing which is the difference between the first bearing and the second bearing.

Claim 14 (New): The mobile terminal device having a route guiding function according to claim 1, further comprising means for displaying an icon image indicating the first bearing on said displaying unit.

Claim 15 (New): The mobile terminal device having a route guiding function according to claim 10, further comprising means for displaying another icon image indicating the second bearing on said displaying unit.

Claim 16 (New): The mobile terminal device having a route guiding function according to claim 4, further comprising means for displaying a current bearing icon image indicating the first bearing and a destination bearing icon image indicating the second bearing on said displaying unit.

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Claim 17 (New): The mobile terminal device having a route guiding function according to claim 1, wherein the position information of the current position is indicated by a latitude A of the current position and a longitude B of the current position, and the predetermined specific information to identify a destination is indicated by a latitude C of the destination and a longitude D of the destination; and

wherein the second bearing is calculated by a formula: $\theta = \arctan \frac{\text{latitude C} - \text{latitude A}}{\text{longitude D} - \text{longitude B}}$.

Claim 18 (New): The mobile terminal device having a route guiding function according to claim 4, wherein the position information of the current position is indicated by a latitude A of the current position and a longitude B of the current position, and the predetermined specific information to identify a destination is indicated by a latitude C of the destination and a longitude D of the destination; and

wherein the second bearing is calculated by a formula: $\theta = \arctan \frac{\text{latitude C} - \text{latitude A}}{\text{longitude D} - \text{longitude B}}$.